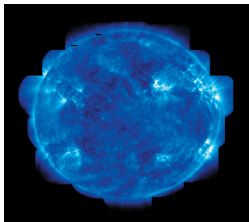




*Sun-Earth Day is March 20th this year. In this issue we explore the latest in NASA sun observing projects and the early history of sun observing.*

## Featured Mission



The Advanced Composition Explorer (ACE) is a NASA spacecraft that studies the sun. Launched in 1997, it is located about 1.5 million km from Earth and 148.5 million km from the Sun. ACE helps NASA scientists predict space weather. Solar weather reports don't often make the six o'clock news.

ACE can provide a one-hour warning of solar storms that can affect electrical systems on Earth. These storms can interfere with electricity supplies, radio, television and cell phones. The solar storms can also be a serious threat to astronauts. Major solar activity is a very serious concern in space flight. Satellites and spacecraft have to be protected against radiation. Astronauts have to take shelter in shielded areas on the Space Shuttle and International Space stations during the strongest solar activity. Satellites like ACE help NASA scientists keep our astronauts safe.

[www.srl.caltech.edu/ACE](http://www.srl.caltech.edu/ACE)

[helios.gsfc.nasa.gov](http://helios.gsfc.nasa.gov)

## Activity Corner

NASA has been studying the sun since the 1950s. For thousands of years before that, people were studying the sun as a way to tell time. Find out how some of our ancestors used the sun to set their calendars. Explore how the sun shaped the lives of the ancient Native Americans of the Chaco Canyon region. Learn about cave dwellings of Mesa Verde, native celebrations of the summer solstice and much more.

[www.traditionsofthesun.org](http://www.traditionsofthesun.org)

## Bytes and Bits



Meet the seven astronauts who will fly on NASA's Return to Flight mission in May. It will be NASA's first Space Shuttle mission since the tragic loss of Columbia in 2003.

[spaceflight.nasa.gov/shuttle/crew/index.html](http://spaceflight.nasa.gov/shuttle/crew/index.html)

This month 37 teams of NES students and family members will participate in the **NES Challenge – Return to the Moon**. Black Mountain Elementary/Junior High in Arizona, Waimea Middle School in Hawaii, Baker Middle School in Louisiana, Carol City Elementary in Florida and Greencastle-Antrim High School in Pennsylvania will all take part. One team from each school will attend the NES Student Symposium at Johnson Space Center in May.

[learners.gsfc.nasa.gov/challenge](http://learners.gsfc.nasa.gov/challenge)

## NESN Puzzler

*What is a sunspot?*

The **first ten individual students** to send the correct answer will win a NASA prize! Send us your name, your teacher's name, your school's name and the school's address. Last month's answer: 1958, Dwight Eisenhower

## NASA Explorers are people like you

**Name:** Chip Ellis

**Job Title:** Electrical Engineer

**Education:** BS in Electrical Engineering



Chip Ellis works with the Space Shuttle Main Engine testing program at NASA's Stennis Space Center in Mississippi. Before an engine can be used for the Space Shuttle, it has to pass many tests. Ground testing of the engines allows NASA to make sure that each engine is safe before it ever flies on the Space Shuttle. Chip thinks the coolest part of his job is watching an engine test. "Everything around begins to shake due to the awesome power of the Space Shuttle Main Engine. It is so loud that you can't talk to the person next to you", Chip says. When he isn't testing engines, Chip spends his time with his family and teaches Sunday school. Chip and his wife have two children. Their oldest child was born with severe brain damage. While raising a child with a disability is an everyday challenge, Chip believes his family is a gift.

## NES Spotlight

**Toyon Elementary School**

**Students:** 480

**Faculty:** 23

Toyon Elementary is located in the foothills of San José, California. This area is better known as "Silicon Valley"- the home of many computer companies. Toyon has a diverse population of students and staff. Students from a dozen different cultural backgrounds attend the school. Many of Toyon's students have parents who attended the school when they were children. Toyon hosts an annual Science Camp for all its 5th grade students. There is also an annual school-wide science fair. Toyon has received grants to make butterfly gardens and to support their annual science fairs. One of Toyon's teachers was chosen to hunt for meteorites in Antarctica in 2001. The school's students have also contributed to the local science community. The students field tested a floor display for The Tech Museum of Innovation prior to its opening. A few years ago, eight students took part in a documentary entitled, "Super Teachers." Wow! Toyon Elementary, you really know how to shine!

[www.berryessa.k12.ca.us/schools/toyon/](http://www.berryessa.k12.ca.us/schools/toyon/)



National Aeronautics and  
Space Administration

Please send comments or questions to [NESNews@nasa.gov](mailto:NESNews@nasa.gov)  
[learners.gsfc.nasa.gov/NESNews](http://learners.gsfc.nasa.gov/NESNews)